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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/450,890	11/29/1999	DAVID N. MAKINSON	SCH-52	8294

22827 7590 05/01/2002

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EXAMINER

NGUYEN, VINH P

ART UNIT	PAPER NUMBER
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2829

DATE MAILED: 05/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/450,890

Applicant(s)

MAKINSON ET AL.

Examiner

VINH P NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-79 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-79 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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1. Claims 14-15,20-21,23-24,32-33,41,45,50-51,63-64,72,77-78, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 14, 24, 33, 50, 63, 77, it is unclear what “nonremovable bridge clip”^(26, 96) represents. Is it shown in any of drawings? As to claim 20, it is unclear whether both resilient connectors and the mating posts and holes are used for connecting the metrology board to the base plate. In claims 23, 32, 41, 45 and 68, it is unclear what “inner cover” and “outer cover” represent. Are they shown in any of drawings? In claim 72, it is unclear what “outer cover” represents. Is it shown in any of drawings?

The dependent claims not specifically address share the same indefiniteness as they depend from rejected base claims.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Selph et al (Pat 4,804,957).

Keep it
As to claims 16-17, Selph et al disclose a utility meter as shown in figure 3 having an enclosure with a cover (66) and a base plate (72), a metrology board (68) electrically connected to the spades (not shown), a circuit board (70) electrically connected to the metrology board (68) for providing selected customized features for the electric meter beyond the metrology board (68). As to claim 17, it appears that the circuit board and the metrology board is electrically connected to each other through a fixed connector so that the circuit board (70) is able to collect data from the metrology board in order to analyze the energy consumption.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5,8-13,52-59,60-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (Pat # 4,368,424) in view of Selph et al (pat # 4,804,957) in view of Johnson (Pat #4,298,839).

As to claims 1, 52-53, Miller discloses an energy meter having an enclosure (58), electrical connection spades (32,33,34,35) extending through the base plate (56), a metrology board (61) connected to the spades (32,33,34,35) through connectors (23,24,29,30) housed within the

casing. It would have been obvious for one of ordinary skill in the art to consider that the connectors (23,24,29,30) are resilient. As to claims 2-3,54-55, Selph et al teach that it would have been well known to use the post and the board defines holes therein to mate with the post such that the board is supported on the base plate (72). It would have been obvious for one of ordinary skill in the art to provide the board of Miller with holes that mates with the posts as taught by Selph et al to the device of Miller because this is an alternative way to mount the board to the base plate. It would have been also well known for one of ordinary skill in the art to provide mating posts and holes associated with the baseplate and the metrology board for mutual physical connection thereof. As to claims 4,56 it would have been further obvious for one of ordinary skill in the art to mount the metrology board to the base plate by using weldments. As to claims 5,57, Miller teaches that the metrology board (61) is used for sensing electrical signals and the board (61) does not have a Hall effect sensor. However, Selph et al teach that it would have been well known for one of ordinary skill in the art to provide a Hall effect sensor (84) on the metrology board (68) so that the current could be detected. It would have been old and well known for one of ordinary skill in the art to provide Hall effect sensor on the board as taught by Selph et al to the board of Miller, this is an alternative way to measure/detect the current. As to claims 8 and 60, it appears that the meter of Miller would include a chassis since this is a conventional feature on the energy meter. As to claim 9, it appears that the meter of Miller has

another board (66) connected to the metrology board (56) through a fixed connector (long bars through the boards (63,64,65,66). As to claims 10 and 61, it appears that the meter of Miller would include a display so that the amount of consumed energy is displayed. As to claim 11, the type of display such as mechanical display would have been well known in the art. As to claim 12, the resilient connectors (23,24,29,30) appears to be cantilever spring connectors. As to claim 13, it appears that the meter of Miller inherently includes a main circuit. As to claims 42-44,46,49,69-71,73,75-76, the device of Miller in view of Selph meet the limitations of these instant claims. As to claim 58, Johnson et al teach that it would have been well known to provide a light source (86,87) and a light pipe (115,117) for transmitting the light from the light source to the outside respectively. It would have been obvious for one of ordinary skill in the art to provide the light source and the light pipe as taught by Johnson to the device of Miller in view of Selph et al so that the measured signal is transmitted to a remote location and the optical readout is obtained respectively. As to claim 59, Loy et al teach that it would have been well known to provide an antenna to the metrology board for transmitting measured signal to a remote location. It would have been obvious for one of ordinary skill in the art to provide the antenna, the light source and light pipe as taught by device of Miller in view of Selph et al so that the measured signal is transmitted to a remote location..

6. Claims 18-22,25,27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Selph et al (pat # 4,804,957) in view of Miller (Pat # 4,368,424) and Johnson (Pat #4,298,839).

Selph et al disclose a utility meter as mentioned in paragraph # 3. As to claim 18, it would have been obvious for one of ordinary skill in the art to provide a snap fit mount for the circuit board since this is an alternative way to mount a circuit board within the enclosure. As to claim 19, it appears that both of the circuit boards inherently receive supply power from a common power supply so that these board would be able to function. As to claims 20,25 and 27, it appears that the device of Miller has resilient connectors for connecting the spades with the metrology board. It would have been obvious for one of ordinary skill in the art to provide the resilient connector as taught by Miller to the device of Selph since this is an alternative way to connect the metrology board to the spades. As to claims 21 and 29-30, the device of Selph has a hall effect sensor (84) mounted on a metrology board (68). As to claims 22, it appears that the meter of Selph would include a chassis since this is a conventional feature on the energy meter. As to claim 28, Johnson disclose a meter as shown in figures 1 and 2 having a light source (86,87), a light pipe (115,117) for transmitting the light from the light source to the outside, an encloseable casing (12) having a cover and a baseplate. It would have been obvious for one of ordinary skill in the art to provide light source and light pipe on the chassis to the device of Selph et al (pat # 4,804,957) in view of Miller so that optical readout is obtained. As to

claim 31, it would have been old and well known to have a chassis and meter display in the device of Selph.

7. Claims 1-2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (Pat #4,298,839) in view of Miller (Pat # 4,368,424) and Selph et al (pat # 4,804,957).

As to claims 1 and 6, Johnson disclose a meter as shown in figures 1 and 2 having a light source (86,87), a light pipe (115,117) for transmitting the light from the light source to the outside, an encloseable casing (12) having a cover and a baseplate. Johnson does not show electrical connection spades, however, it appears that the device of Johnson inherently has spades and metrology board (16) for mounting electronic components. The device of Johnson does not disclose resilient connectors connected to the spades. However, Miller discloses an energy meter having an enclosure (58), electrical connection spades (32,33,34,35) extending through the base plate (56), a metrology board (61) connected to the spades (32,33,34,35) through resilient connectors (23,24,29,30) housed within the casing. It would have been obvious for one of ordinary skill in the art to have spades of Johnson connected to resilient connectors as taught by Miller so that these spades are easily removed. As to claim 2, Selph et al teach that it would have been well known to use the post and the board defines holes therein to mate with the post such that the board is supported on the base plate (72). It would have been obvious for one

of ordinary skill in the art to provide the board with holes that mates with the posts as taught by Selph et al to the device of Johnson because this is an alternative way to mount the board to the base plate. It would have been also well known for one of ordinary skill in the art to provide mating posts and holes associated with the baseplate and the metrology board for mutual physical connection thereof.

8. Claims 1-2 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loy et al (Pat # 5,966,010) in view of Miller (Pat # 4,368,424) and Selph et al (pat # 4,804,957).

As to claims 1 and 6, Loy et al disclose a meter as shown in figure 1 having a metrology board (20), an encloseable casing (12) having a cover (26) and a baseplate (12) and an antenna (22) connected to the metrology board (20). It appears that the device of Loy et al inherently has spades (36). The device of Loy et al does not disclose resilient connectors connected to the spades. However, Miller discloses an energy meter having an enclosure (58), electrical connection spades (32,33,34,35) extending through the base plate (56), a metrology board (61) connected to the spades (32,33,34,35) through resilient connectors (23,24,29,30) housed within the casing. It would have been obvious for one of ordinary skill in the art to have spades of Loy et al connected to resilient connectors as taught by Miller so that these spades are easily removed. As to claim 2, Selph et al teach that it would have been well known to use the post and the board defines holes therein to mate with the post such that the board is supported on the base plate (72). It would have been obvious for one of ordinary skill in the art to provide the board

with holes that mates with the posts as taught by Selph et al to the device of Loy et al because this is an alternative way to mount the board to the base plate. It would have been also well known for one of ordinary skill in the art to provide mating posts and holes associated with the baseplate and the metrology board for mutual physical connection thereof.

9. Claims 34,38-40,65,66-67,69,74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Selph et al (pat # 4,804,957) in view of Loy et al (Pat # 5,966,010) and Johnson (Pat #4,298,839) and Shincovich et al (Pat # 5,590,179).

As to claims 34,38-39,65-67, Selph et al disclose a utility meter as shown in figure 3 having an enclosure with a cover (66) and a base plate (72), a metrology board (68) electrically connected to the spades (not shown), a circuit board (70) electrically connected to the metrology board (68) for providing selected customized features for the electric meter beyond the metrology board (68). However, the board of Selph et al does not have an antenna. Loy et al disclose a meter as shown in figure 1 having a metrology board (20), an encloseable casing (12) having a cover (26) and a baseplate (12) and an antenna (22) connected to the metrology board (20). It would have been obvious for one of ordinary skill in the art to provide an antenna to the metrology board so that the measured signal is transmitted to a remote location. As to claim 35, it is well known that there is a power supply for providing power to those boards. As to claims 36 and 41,, it would have been well known to connect the metrology board to the circuit board

through a fixed connector. As to claims 37 and 40, Johnson disclose a meter as shown in figures 1 and 2 having a light source (86,87), a light pipe (115,117) for transmitting the light from the light source to the outside, an encloseable casing (12) having a cover and a baseplate. It would have been obvious for one of ordinary skill in the art to provide light source and light pipe on the chassis to the device of Selph et al (pat # 4,804,957) in view of Loy et al so that optical readout is obtained. As to claim 52, Shincovich et al teach that it would have been well known in the art to provide one of hardwired transmissions, radio frequency transmission, pulse outputs, optical link outputs, modem telephone line transmission and wireless transmission. It would have been obvious for one of ordinary skill in the art to provide such transmissions as taught by Shincovich et al to the device of Miller in view of Selph since this is an alternative way to transmit measured signals to a remote locations.

10. Claims 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (Pat # 4,368,424) in view of Selph et al (pat # 4,804,957) as applied to claims 42-44 and 46 above, and further in view of Loy et al (Pat # 5,966,010) and Johnson et al (Pat #4,298,839).

As to claims 47-48, Loy et al and Johnson et al teach that it would have been well known to provide an antenna to the metrology board for transmitting measured signal to a remote location and to provide a light source (86,87), a light pipe (115,117) for transmitting the light from the light source to the outside respectively. It would have been obvious for one of ordinary


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skill in the art to provide the antenna, the light source and light pipe as taught by device of Miller in view of Selph et al so that the measured signal is transmitted to a remote location and the optical readout is obtained respectively.

11. Claims 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (Pat # 4,368,424) in view of Selph et al (pat # 4,804,957) as applied to claims 42-44 and 46 above, and further in view of Shincovich et al (Pat # 5,590,179).

As to claim 52, Shincovich et al teach that it would have been well known in the art to provide one of hardwired transmissions, radio frequency transmission, pulse outputs, optical link outputs, modem telephone line transmission and wireless transmission. It would have been obvious for one of ordinary skill in the art to provide such transmissions as taught by Shincovich et al to the device of Miller in view of Selph since this is an alternative way to transmit measured signals to a remote locations.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINH P. NGUYEN whose telephone number is (703) 305-4914. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4900.


VINH P. NGUYEN
PRIMARY EXAMINER
ART UNIT 2829
04/29/2002